Contents Volume 60 1999

Volume 60 No. 1 April 1999

Announcement

Editor-in-Chief, *Photosynthesis Research* v

Reviews

Microbial ribulose 1,5-bisphosphate carboxylase/oxygenase: A different perspective
F.R. Tabita 1–28

Questions about the complexity of chloroplast ribulose-1,5-bisphosphate carboxylase/oxygenase
R.J. Spreitzer 29–42

Enzymes of chlorophyll biosynthesis
S.I. Beale 43–73

Regular papers

Photoinhibition of Photosystem I damages both reaction centre proteins PSI-A and PSI-B and acceptor-side located small Photosystem I polypeptides
S. E. Tjus, B. L. Møller, H.V. Scheller 75–86

Protochlorophyllide forms and energy transfer in dark-grown wheat leaves. Studies by conventional and laser excited fluorescence spectroscopy between 10 K–100 K
K. Kis-Petik, B. Böddi, A.D. Kaposi, J. Fidy 87–98

Volume 60 Nos. 2–3 May–June 1999

Personal perspective

Personal recollections of 40 years in photosynthesis research
G. Forti 99–110

Review

The role of trace metals in photosynthetic electron transport in O_2-evolving organisms
J.A. Raven, M.C.W. Evans, R.E. Korb 111–149

Review/Hypothesis

How acidic is the lumen?
D.M. Kramer, C.A. Sacksteder, J.A. Cruz 151–163

Hypothesis

Part of the fluorescence of chlorophyll *a* may originate in excited triplet states
R.S. Knox, J.S. Brown, P.D. Laible, M.F.J. Talbot 165–177

Regular papers

Photosynthetic apparatus in primary leaves of barley seedlings grown under blue or red light of very low photon flux densities
N. Bukhov, V. Makarova, V. Bondar, I. Drozdova, E. Egorova, L. Kotova, A. Kotov, T. Krendeleva **179–189**

Similarity between electron donor side reactions in the solubilized Photosystem II–LHC II supercomplex and Photosystem-II-containing membranes
M.J. Schilstra, J. Nield, W. Dörner, B. Hankamer, M. Carradus, L.M.C. Barter, J. Barber, D.R. Klug **191–198**

Up-regulation of sucrose phosphate synthase in rice grown under elevated CO_2 and temperature
M.W. Hussain, L.H. Allen Jr, G. Bowes **199–208**

The importance of PS I chlorophyll red forms in light-harvesting by leaves
A. Rivadossi, G. Zucchelli, F.M. Garlaschi, R.C. Jennings **209–215**

Comparison of light induced and cell cycle dependent changes in the photosynthetic apparatus: A fluorescence induction study on the green alga *Scenedesmus obliquus*
B.J. Strasser, H. Dau, I. Heinze, H. Senger **217–227**

How the formation process influences the structure of BChl *c* aggregates
M. Umetsu, Z.-Y. Wang, J. Zhang, T. Ishii, K. Uehara, Y. Inoko, M. Kobayashi, T. Nozawa **229–239**

Role of the protein's low dielectric constant in the functioning of the photosynthetic reaction center
L.I. Krishtalik **241–246**

Estimation of rate constants of the partial reactions of carboxylation of ribulose-1,5-bisphosphate *in vivo*
J. Viil, H. Ivanova, T. Pärnik **247–256**

Technical communication

The molar extinction coefficient of bacteriochlorophyll *e* and the pigment stoichiometry in *Chlorobium phaeobacteroides*
C.M. Borrego, J.B. Arellano, C.A. Abella, T. Gillbro, J. Garcia-Gil **257–264**

Contents Volume 60 **265–266**

Author index Volume 60 **267**